

110TH CONGRESS
1ST SESSION

S. 2149

To amend the Energy Policy Act of 1992 to establish a program to provide incentives for projects to produce synthetic gas, liquid fuels, and other products from coal and other feedstocks while simultaneously reducing greenhouse gas emissions and reliance of the United States on petroleum and natural gas, and for other purposes.

IN THE SENATE OF THE UNITED STATES

OCTOBER 4, 2007

Mr. DORGAN introduced the following bill; which was read twice and referred to the Committee on Finance

A BILL

To amend the Energy Policy Act of 1992 to establish a program to provide incentives for projects to produce synthetic gas, liquid fuels, and other products from coal and other feedstocks while simultaneously reducing greenhouse gas emissions and reliance of the United States on petroleum and natural gas, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Coal Fuels and Indus-
3 trial Gasification Demonstration and Development Act of
4 2007”.

5 **SEC. 2. COAL INNOVATION PROGRAM.**

6 (a) IN GENERAL.—Title XXXI of the Energy Policy
7 Act of 1992 (42 U.S.C. 13571 et seq.) is amended by add-
8 ing at the end the following:

9 **“SEC. 3105. COAL INNOVATION PROGRAM.**

10 “(a) DEFINITIONS.—In this section:

11 “(1) ADMINISTRATOR.—The term ‘Adminis-
12 trator’ means the Administrator of the Environ-
13 mental Protection Agency.

14 “(2) CARBON CAPTURE.—The term ‘carbon
15 capture’ means the capture, separation, and com-
16 pression of carbon dioxide that would otherwise be
17 released to the atmosphere at a facility in the pro-
18 duction of end products of a project prior to trans-
19 portation of the carbon dioxide to a long-term stor-
20 age site.

21 “(3) COAL-TO-LIQUID PRODUCT.—The term
22 ‘coal-to-liquid product’ means a liquid fuel resulting
23 from the conversion of a feedstock, as described in
24 this section.

1 “(4) COMBUSTIBLE END PRODUCT.—The term
2 ‘combustible end product’ means any product of a
3 facility intended to be used as a combustible fuel.

4 “(5) CONVENTIONAL BASELINE EMISSIONS.—
5 The term ‘conventional baseline emissions’ means—

6 “(A) the lifecycle greenhouse gas emissions
7 of a facility that produces combustible end
8 products, using petroleum as a feedstock, that
9 are equivalent to combustible end products pro-
10 duced by a facility of comparable size through
11 an eligible project;

12 “(B) in the case of noncombustible prod-
13 ucts produced through an eligible project, the
14 average lifecycle greenhouse gas emissions emit-
15 ted by projects that—

16 “(i) are of comparable size; and

17 “(ii) produce equivalent products
18 using conventional feedstocks; and

19 “(C) in the case of synthesized gas in-
20 tended for use as a combustible fuel in lieu of
21 natural gas produced by an eligible project, the
22 lifecycle greenhouse gas emissions that would
23 result from equivalent use of natural gas.

24 “(6) CONVENTIONAL FEEDSTOCK.—

1 “(A) IN GENERAL.—The term ‘conven-
2 tional feedstock’ means a traditional carbon-
3 based feedstock that—

4 “(i) is supplied to any powerplant, oil
5 refinery, or petrochemical production facil-
6 ity that is located in the United States as
7 of the date of enactment of this section;
8 and

9 “(ii) could be made available in large
10 quantities under a long-term contract.

11 “(B) INCLUSIONS.—The term ‘conven-
12 tional feedstock’ includes—

13 “(i) coal;

14 “(ii) natural gas; and

15 “(iii) crude oil.

16 “(C) EXCLUSIONS.—The term ‘conven-
17 tional feedstock’ does not include—

18 “(i) petroleum coke; and

19 “(ii) biomass.

20 “(7) DEEP SALINE FORMATION.—The term
21 ‘deep saline formation’ means a measurable unit of
22 rock that contains nonpotable water that is—

23 “(A) present in a stratigraphic column lo-
24 cated beneath any fresh potable water aquifer;
25 and

1 “(B) of a sufficient depth to store carbon
2 dioxide in a supercritical phase.

3 “(8) ELIGIBLE FEEDSTOCK.—The term ‘eligible
4 feedstock’ includes—

5 “(A) coal;

6 “(B) petroleum residue;

7 “(C) renewable biomass; and

8 “(D) any other combination of materials of
9 which coal is the predominant component with
10 respect to energy content.

11 “(9) ELIGIBLE PROJECT.—The term ‘eligible
12 project’ means a project—

13 “(A) that produces liquid transportation
14 fuels, industrial chemicals, or electricity; and

15 “(B) for which—

16 “(i) with respect to a project that is
17 selected by the Secretary during a period
18 described in subsection (b)(2)(C)(i) or sub-
19 section (c)(3)(C)(i)—

20 “(I) the annual lifecycle green-
21 house gas emissions are not greater
22 than conventional baseline emissions;

23 “(II) at least 70 percent of the
24 carbon dioxide that would otherwise
25 be released to the atmosphere at the

1 facility in the production of end prod-
2 ucts from the project is captured for
3 long-term storage; and

4 “(III) the individual or entity
5 carrying out the eligible project has
6 entered into an enforceable agreement
7 with the Secretary to implement car-
8 bon capture at the percentage that, by
9 the end of the 5-year period after
10 commencement of commercial oper-
11 ation of the eligible project achieves a
12 reduction in carbon emissions that is
13 not less than 70 percent;

14 “(ii) with respect to a project that is
15 selected by the Secretary during a period
16 described in subsection (b)(2)(C)(ii) or
17 subsection (c)(3)(C)(ii)—

18 “(I) the annual lifecycle green-
19 house gas emissions are at least 15
20 percent lower than conventional base-
21 line emissions;

22 “(II) at least 80 percent of the
23 carbon dioxide that would otherwise
24 be released to the atmosphere at the
25 facility in the production of end prod-

1 ucts from the project is captured for
2 long-term storage; and

3 “(III) the individual or entity
4 carrying out the eligible project has
5 entered into an enforceable agreement
6 with the Secretary to implement car-
7 bon capture at the percentage that, by
8 the end of the 5-year period after
9 commencement of commercial oper-
10 ation of the eligible project achieves a
11 reduction in carbon emissions that is
12 not less than 80 percent; and

13 “(iii) in the opinion of the Secretary,
14 sufficient commitments have been secured
15 to achieve long-term storage of captured
16 carbon dioxide beginning as of the date of
17 commencement of commercial operation of
18 the project.

19 “(10) FACILITY.—The term ‘facility’ means a
20 facility at which the conversion of feedstocks to end
21 products takes place.

22 “(11) GASIFICATION TECHNOLOGY.—The term
23 ‘gasification technology’ means any process that—

24 “(A) converts coal, petroleum residue, re-
25 newable biomass, or other material that is re-

1 covered for energy or feedstock value into a
2 synthesis gas composed primarily of carbon
3 monoxide and hydrogen for direct use or subse-
4 quent chemical or physical conversion; and

5 “(B) produces oxygen for the gasification,
6 conditioning, or cleanup of synthetic gas to pre-
7 pare the synthetic gas for downstream use.

8 “(12) GREENHOUSE GAS.—The term ‘green-
9 house gas’ means any of—

10 “(A) carbon dioxide;

11 “(B) methane;

12 “(C) nitrous oxide;

13 “(D) hydrofluorocarbons;

14 “(E) perfluorocarbons; and

15 “(F) sulfur hexafluoride.

16 “(13) LIFECYCLE GREENHOUSE GAS EMIS-
17 SIONS.—The term ‘lifecycle greenhouse gas emis-
18 sions’ means the aggregate quantity of greenhouse
19 gases directly attributable to the production and
20 transportation of end products at a facility, includ-
21 ing the production, extraction, cultivation, distribu-
22 tion, and transportation of feedstocks, and the sub-
23 sequent distribution and use of any combustible end
24 products, as modified by deducting, as determined
25 by the Administrator—

1 “(A) any greenhouse gases captured at the
2 facility and sequestered;

3 “(B) the carbon content, expressed in units
4 of carbon dioxide equivalent, of any feedstock
5 that is renewable biomass;

6 “(C) the carbon content, expressed in units
7 of carbon dioxide equivalent, of any end prod-
8 ucts that do not result in the release of carbon
9 dioxide to the atmosphere; and

10 “(D) the acreage of terrestrial sequestra-
11 tion that is used to grow feedstocks to be used
12 at the facility, including soil-root carbon storage
13 areas at which—

14 “(i) biomass is grown on carbon-de-
15 pleted soils; and

16 “(ii) carbon is stored in the soil under
17 which the biomass is grown.

18 “(14) LONG-TERM STORAGE.—The term ‘long-
19 term storage’ means sequestration with an expected
20 maximum rate of carbon dioxide leakage over a spec-
21 ified period of time that is consistent with the objec-
22 tive of reducing atmospheric concentrations of car-
23 bon dioxide, subject to a permit issued pursuant to
24 law in effect as of the date of the sequestration.

1 “(15) RENEWABLE BIOMASS.—The term ‘re-
2 newable biomass’ means—

3 “(A) nonmerchantable materials or
4 precommercial thinnings that—

5 “(i) are byproducts of preventive
6 treatments, such as trees, wood, brush,
7 thinnings, chips, and slash, that are re-
8 moved—

9 “(I) to reduce hazardous fuels;

10 “(II) to reduce or contain disease
11 or insect infestation; or

12 “(III) to restore forest health;

13 “(ii) would not otherwise be used for
14 higher-value products; and

15 “(iii) are harvested from National
16 Forest System land or public lands (as de-
17 fined in section 103 of the Federal Land
18 Policy and Management Act of 1976 (43
19 U.S.C. 1702))—

20 “(I) where permitted by law; and

21 “(II) in accordance with—

22 “(aa) applicable land man-
23 agement plans; and

24 “(bb) the requirements for
25 old-growth maintenance, restora-

1 tion, and management direction
2 of paragraphs (2), (3), and (4) of
3 subsection (e), and the require-
4 ments for large-tree retention of
5 subsection (f), of section 102 of
6 the Healthy Forests Restoration
7 Act of 2003 (16 U.S.C. 6512); or

8 “(B) any organic matter that is available
9 on a renewable or recurring basis from non-
10 Federal land or from land belonging to an In-
11 dian tribe, or an Indian individual, that is held
12 in trust by the United States or subject to a re-
13 striction against alienation imposed by the
14 United States, including—

15 “(i) renewable plant material, includ-
16 ing—

17 “(I) feed grains;

18 “(II) agricultural commodities
19 (including any crop that is planted as
20 an energy crop);

21 “(III) plants and trees; and

22 “(IV) algae; and

23 “(ii) waste material, including—

24 “(I) crop residue;

1 “(II) vegetative waste material
2 (including wood waste and wood resi-
3 dues);

4 “(III) animal waste and byprod-
5 ucts (including fats, oils, greases, and
6 manure); and

7 “(IV) food waste and yard waste.

8 “(16) SEQUESTRATION.—The term ‘sequestra-
9 tion’ means the placement of carbon dioxide in a ge-
10 ological formation, including—

11 “(A) an operating oil and gas field;

12 “(B) coal bed methane recovery;

13 “(C) a depleted oil and gas field;

14 “(D) an unmineable coal seam;

15 “(E) a deep saline formation; and

16 “(F) a deep geological system.

17 “(17) UNMINEABLE COAL SEAM.—The term
18 ‘unmineable coal seam’ means a coal seam that is—

19 “(A) determined by the Secretary of the
20 Interior to be economically unrecoverable (in-
21 cluding by any foreseeable advance in mining
22 technology); and

23 “(B) located at a depth at which the tem-
24 perature and pressure at the coal seam are suf-

1 efficient to maintain carbon dioxide in a super-
2 critical phase.

3 “(b) FINANCIAL ASSISTANCE COOPERATIVE AGREE-
4 MENT PROGRAM.—

5 “(1) IN GENERAL.—Subject to paragraph (3),
6 not later than 1 year after the date of the enactment
7 of this section, the Secretary shall carry out a pro-
8 gram to provide grants for use in obtaining or car-
9 rying out any services necessary for the planning
10 and permitting of an eligible project.

11 “(2) SELECTION OF ELIGIBLE PROJECTS.—

12 “(A) IN GENERAL.—In accordance with
13 subparagraphs (B) and (C), the Secretary shall
14 select eligible projects to receive grants under
15 this subsection—

16 “(i) through the conduct of a reverse
17 auction, in which eligible projects proposed
18 to be carried out that have the greatest
19 percentage reduction of lifecycle green-
20 house gas emissions in comparison to fa-
21 cilities that use conventional feedstocks
22 and do not use carbon capture and seques-
23 tration technologies, are given priority;

24 “(ii) that, taken together, would—

1 “(I) represent a variety of geo-
2 graphical regions;

3 “(II) represent a variety of facili-
4 ties, each of which is capable of pro-
5 ducing a different quantity of syn-
6 thetic gas, liquid fuel, or other prod-
7 uct from coal and other feedstocks;

8 “(III) use a variety of feedstocks
9 and types of coal; and

10 “(IV) to the extent consistent
11 with achieving long-term storage, rep-
12 resent a variety of geological forma-
13 tions; and

14 “(iii) for which eligible projects, in the
15 opinion of the Secretary—

16 “(I) each award recipient is fi-
17 nancially viable without the receipt of
18 additional Federal funding associated
19 with the proposed project;

20 “(II) each recipient will provide
21 sufficient information to the Secretary
22 for the Secretary to ensure that the
23 qualified investment is expended effi-
24 ciently and effectively;

1 “(III) a market exists for the
2 products of the proposed project, as
3 evidenced by contracts or written
4 statements of intent from potential
5 customers;

6 “(IV) the project team of each
7 recipient is competent in the construc-
8 tion and operation of the gasification
9 technology proposed; and

10 “(V) each recipient has met such
11 other criteria as may be established
12 and published by the Secretary.

13 “(B) SPECIAL CONSIDERATION.—In select-
14 ing eligible projects under subparagraph (A),
15 the Secretary shall give special consideration to
16 projects that—

17 “(i) include a feedstock that is com-
18 prised of a quantity of biomass that is
19 greater than 5 percent of the total quan-
20 tity of the feedstock (as measured by the
21 weight of the feedstock); or

22 “(ii) participate in a regional carbon
23 sequestration partnership, as described in
24 the notice entitled ‘Notice of Availability of

1 a Financial Assistance Solicitation’ (67
2 Fed. Reg. 71540 (December 2, 2002)).

3 “(C) AUTHORIZED QUANTITY OF ELIGIBLE
4 PROJECTS.—In carrying out subparagraph (A),
5 the Secretary shall—

6 “(i) for the 5-year period beginning
7 on the date that is 1 year after the date
8 of enactment of this section, select a quan-
9 tity of not more than 3 eligible projects;
10 and

11 “(ii) for the 5-year period beginning
12 on the date that is 6 years after the date
13 of enactment of this section, select a quan-
14 tity of not more than 3 eligible projects.

15 “(3) MAXIMUM AMOUNT OF GRANTS.—In car-
16 rying out this subsection, the Secretary shall provide
17 not more than—

18 “(A) \$20,000,000 in grant funds for any
19 eligible project; and

20 “(B) \$120,000,000 in grant funds, in the
21 aggregate, for all eligible projects.

22 “(c) DIRECT LOAN PROGRAM.—

23 “(1) IN GENERAL.—Not later than 1 year after
24 the date of enactment of this section, and subject to
25 funds being made available in advance through ap-

1 appropriations Acts, the Secretary shall carry out a
2 program to provide a total of not more than
3 \$10,000,000,000 in loans to eligible individuals and
4 entities (as determined by the Secretary) for use in
5 carrying out eligible projects.

6 “(2) APPLICATION.—To receive a loan from the
7 Secretary under paragraph (1), an applicant shall
8 submit to the Secretary an application at such time,
9 in such manner, and containing such information as
10 the Secretary may require, including a written as-
11 surance that—

12 “(A) all laborers and mechanics employed
13 by contractors or subcontractors during con-
14 struction, alteration, or repair that is financed,
15 in whole or in part, by a loan under this sub-
16 section shall be paid wages at rates that are not
17 less than those prevailing on similar construc-
18 tion in the locality, as determined by the Sec-
19 retary of Labor in accordance with sections
20 3141 through 3144, 3146, and 3147 of title 40,
21 United States Code; and

22 “(B) the Secretary of Labor shall, with re-
23 spect to the labor standards described in this
24 paragraph, have the authority and functions set
25 forth in Reorganization Plan Numbered 14 of

1 1950 (5 U.S.C. App.) and section 3145 of title
2 40, United States Code.

3 “(3) SELECTION OF ELIGIBLE PROJECTS.—

4 “(A) IN GENERAL.—In accordance with
5 subparagraphs (B) and (C), the Secretary shall
6 select eligible projects to receive loans under
7 this subsection—

8 “(i) through the conduct of a reverse
9 auction, in which eligible projects proposed
10 to be carried out that have the greatest
11 percentage reduction of lifecycle green-
12 house gas emissions in comparison to fa-
13 cilities that use conventional feedstocks
14 and do not use carbon capture and seques-
15 tration technologies, are given priority;

16 “(ii) that, taken together, would—

17 “(I) represent a variety of geo-
18 graphic regions;

19 “(II) represent a variety of facili-
20 ties, each of which is capable of pro-
21 ducing a different quantity of syn-
22 thetic gas, liquid fuel, or other prod-
23 uct from coal and other feedstocks;

24 “(III) use a variety of types of
25 feedstocks and coal; and

1 “(IV) to the extent consistent
2 with achieving long-term storage, rep-
3 resent a variety of geological forma-
4 tions; and

5 “(iii) for which eligible projects, in the
6 opinion of the Secretary—

7 “(I) each award recipient is fi-
8 nancially viable without the receipt of
9 additional Federal funding associated
10 with the proposed project;

11 “(II) each recipient will provide
12 sufficient information to the Secretary
13 for the Secretary to ensure that the
14 qualified investment is expended effi-
15 ciently and effectively;

16 “(III) a market exists for the
17 products of the proposed project, as
18 evidenced by contracts or written
19 statements of intent from potential
20 customers;

21 “(IV) the project team of each
22 recipient is competent in the construc-
23 tion and operation of the gasification
24 technology proposed; and

1 “(V) each recipient has met such
2 other criteria as may be established
3 and published by the Secretary.

4 “(B) SPECIAL CONSIDERATION.—In select-
5 ing eligible projects under subparagraph (A),
6 the Secretary shall give special consideration to
7 projects that—

8 “(i) include a feedstock that is com-
9 prised of a quantity of biomass that is
10 greater than 5 percent of the total quan-
11 tity of the feedstock (as measured by the
12 weight of the feedstock); or

13 “(ii) participate in a regional carbon
14 sequestration partnership, as described in
15 the notice entitled ‘Notice of Availability of
16 a Financial Assistance Solicitation’ (67
17 Fed. Reg. 71540 (December 2, 2002)).

18 “(C) AUTHORIZED QUANTITY OF ELIGIBLE
19 PROJECTS.—In carrying out subparagraph (A),
20 the Secretary shall—

21 “(i) for the 5-year period beginning
22 on the date that is 1 year after the date
23 of enactment of this section, select a quan-
24 tity of not more than 3 eligible projects;
25 and

1 “(ii) for the 5-year period beginning
2 on the date that is 6 years after the date
3 of enactment of this section, select a quan-
4 tity of not more than 3 eligible projects.

5 “(4) USE OF LOAN FUNDS.—

6 “(A) IN GENERAL.—Subject to subpara-
7 graph (B), funds from a loan provided under
8 this subsection may be used to pay up to 100
9 percent of the costs of capital associated with
10 reducing lifecycle greenhouse gas emissions at
11 the facility (including carbon dioxide capture,
12 compression, and long-term storage, cogenera-
13 tion, and gasification of biomass) carried out as
14 part of an eligible project, including—

15 “(i) equipment relating to—

16 “(I) the air separation unit of the
17 facility;

18 “(II) the separation or capture of
19 carbon dioxide;

20 “(III) the purification or drying
21 of carbon dioxide;

22 “(IV) the compression of carbon
23 dioxide;

24 “(V) the long-term storage of
25 carbon dioxide;

1 “(VI) the cogeneration of electric
2 power;

3 “(VII) the cleanup of synthetic
4 gas at the facility; and

5 “(VIII) the water-gas shift reac-
6 tor of the facility;

7 “(ii) fuel handling equipment that is
8 used for—

9 “(I) cofeeding coal and biomass
10 to a gasification system; and

11 “(II) feeding biomass to a gasifi-
12 cation system; and

13 “(iii) a gasification system that is de-
14 signed—

15 “(I) to operate with equipment
16 that is used for the cofeeding of coal
17 and biomass in producing an accept-
18 able syngas for the production of liq-
19 uid fuels, industrial chemicals, or elec-
20 tronic power; and

21 “(II) to operate with biomass.

22 “(B) TOTAL PROJECT COST.—Funds from
23 a loan provided under this subsection may not
24 be used to pay more than 50 percent of the
25 total cost of an eligible project.

1 “(5) RATES, TERMS, AND REPAYMENT OF
2 LOANS.—A loan provided under this subsection—

3 “(A) shall have an interest rate that, as of
4 the date on which the loan is made, is equal to
5 the cost of funds to the Department of the
6 Treasury for obligations of comparable matu-
7 rity;

8 “(B) shall have a term equal to the lesser
9 of—

10 “(i) the projected life, in years, of the
11 eligible project to be carried out using
12 funds from the loan, as determined by the
13 Secretary; and

14 “(ii) 25 years;

15 “(C) may be subject to a deferral in repay-
16 ment for not more than 5 years after the date
17 on which the eligible project carried out using
18 funds from the loan first begins operations, as
19 determined by the Secretary; and

20 “(D) shall be made on the condition that
21 the Secretary shall be subrogated to the rights
22 of the recipient of the payment as specified in
23 the loan or related agreements, including, as
24 appropriate, the authority (notwithstanding any
25 other provision of law)—

1 “(i) to complete, maintain, operate,
2 lease, or otherwise dispose of any property
3 acquired pursuant to the guarantee or a
4 related agreement; or

5 “(ii) to permit the borrower, pursuant
6 to an agreement with the Secretary, to
7 continue to pursue the purposes of the
8 project, if the Secretary determines the
9 pursuit to be in the public interest.

10 “(d) METHODOLOGY.—

11 “(1) IN GENERAL.—Not later than 18 months
12 after the date of enactment of this section, in ac-
13 cordance with paragraph (2), the Administrator, in
14 consultation with the Secretary and the Secretary of
15 Defense, shall, by regulation, establish a method-
16 ology for use in determining the lifecycle greenhouse
17 gas emissions of coal-derived liquid transportation
18 fuels and other products produced using—

19 “(A) coal gasification technology;

20 “(B) coal and biomass gasification tech-
21 nology;

22 “(C) the Fischer-Tropsch technology; and

23 “(D) any other technology that is in com-
24 mercial use.

1 “(2) PARTICIPATION OF CERTAIN INDIVIDUALS
2 AND ENTITIES.—In establishing the methodology de-
3 scribed in paragraph (1), the Administrator, in con-
4 sultation with the Secretary and the Secretary of
5 Defense, shall seek the participation of, and consider
6 comments provided by—

7 “(A) individuals representing private sector
8 organizations that may be affected by the meth-
9 odology; and

10 “(B) any other individual or entity that
11 represents an interested organization.

12 “(e) REPORTING REQUIREMENTS.—

13 “(1) IN GENERAL.—Not later than 180 days
14 after the date on which an eligible project receives
15 from the Secretary funds from a grant under sub-
16 section (b) or a loan under subsection (c), and each
17 90-day period thereafter, in accordance with para-
18 graph (2), the individual or entity carrying out the
19 eligible project shall submit to the Administrator a
20 report that contains, for the period covered by the
21 report—

22 “(A) a description of—

23 “(i) the quantity and type of fossil
24 fuels and non-carbon dioxide greenhouse
25 gases produced, refined, imported, ex-

1 ported, and consumed by the eligible
2 project;

3 “(ii) the greenhouse gas emissions in
4 metric tons of each greenhouse gas emitted
5 and in metric tons of carbon dioxide equiv-
6 alent of each greenhouse gas emitted by
7 the eligible project, measured using moni-
8 toring systems for fuel flow or emissions
9 that use—

10 “(I) continuous emission moni-
11 toring; or

12 “(II) an equivalent system of
13 comparable rigor, accuracy, and qual-
14 ity; and

15 “(iii) the quantity and type of—

16 “(I) feedstock fossil fuel con-
17 sumption of the eligible project; and

18 “(II) process emissions of the eli-
19 gible project; and

20 “(B) any other data necessary for accurate
21 accounting of greenhouse gas emissions, as de-
22 termined by the Administrator.

23 “(2) ELECTRONIC SUBMISSION OF REPORT.—

24 An individual or entity carrying out an eligible
25 project described in paragraph (1) shall electroni-

1 cally submit to the Administrator each report re-
2 quired under that paragraph in such form and in
3 such manner as may be required by the Adminis-
4 trator.

5 “(3) NO EFFECT ON OTHER REQUIREMENTS.—
6 Nothing in this subsection affects any requirement
7 in effect as of the date of enactment of this section
8 relating to the reporting of—

9 “(A) fossil fuel production, refining, impor-
10 tation, exportation, or consumption data;

11 “(B) greenhouse gas emission data; or

12 “(C) other relevant data.

13 “(f) STUDY OF MAINTAINING COAL-TO-LIQUID
14 PRODUCTS IN STRATEGIC PETROLEUM RESERVE.—Not
15 later than 1 year after the date of enactment of this sec-
16 tion, the Secretary and the Secretary of Defense shall—

17 “(1) conduct a study of the feasibility and suit-
18 ability of maintaining coal-to-liquid products in the
19 Strategic Petroleum Reserve; and

20 “(2) submit to the Committee on Energy and
21 Natural Resources and the Committee on Armed
22 Services of the Senate and the Committee on Energy
23 and Commerce and the Committee on Armed Serv-
24 ices of the House of Representatives a report de-
25 scribing the results of the study.

1 “(g) REPORT ON EMISSIONS OF COAL-TO-LIQUID
2 PRODUCTS USED AS TRANSPORTATION FUELS.—

3 “(1) IN GENERAL.—The Administrator, in co-
4 operation with the Secretary, the Secretary of De-
5 fense, and the Administrator of the Federal Aviation
6 Administration, shall—

7 “(A) carry out a research and demonstra-
8 tion program to evaluate the emissions of the
9 use of coal-to-liquid fuel for transportation, in-
10 cluding gasoline, diesel, marine, and jet fuel;

11 “(B) evaluate the effect of using coal-to-
12 liquid transportation fuel on emissions of vehi-
13 cles, including motor vehicles and nonroad vehi-
14 cles, and aircraft (as those terms are defined in
15 sections 216 and 234, respectively, of the Clean
16 Air Act (42 U.S.C. 7550, 7574)); and

17 “(C) in accordance with paragraph (4),
18 and not later than 540 days after the date of
19 enactment of this section, submit to Congress a
20 report on the effect on air and water quality,
21 water scarcity, land use, and public health of
22 using coal-to-liquid fuel in the transportation
23 sector.

24 “(2) GUIDANCE AND TECHNICAL SUPPORT.—
25 The Administrator, in consultation with the Sec-

1 retary, shall issue any guidance or technical support
2 documents necessary to facilitate the effective use of
3 coal-to-liquid fuel and blends under this subsection.

4 “(3) REQUIREMENTS.—The program described
5 in paragraph (1)(A) shall take into consideration—

6 “(A) the use of neat (100 percent) coal-to-
7 liquid fuel and blends of coal-to-liquid fuels
8 with conventional crude oil-derived fuel for
9 heavy-duty and light-duty diesel engines, gaso-
10 line engines, marine propulsion, and the avia-
11 tion sector;

12 “(B) the production costs associated with
13 domestic production of those fuels and prices
14 for consumers; and

15 “(C) the overall greenhouse gas effects
16 of—

17 “(i) substituting coal-derived fuels for
18 crude oil-derived fuels;

19 “(ii) using carbon capture and storage
20 technologies; and

21 “(iii) including biomass as a feedstock
22 in the production process of the fuels.

23 “(4) REPORTS.—The Administrator shall sub-
24 mit to the Committee on Energy and Natural Re-

1 sources of the Senate and the Committee on Energy
2 and Commerce of the House of Representatives—

3 “(A) not later than 180 days after the date
4 of enactment of this section, an interim report
5 on actions taken to carry out this subsection;
6 and

7 “(B) not later than 1 year after the date
8 of enactment of this section, a final report on
9 actions taken to carry out this subsection.

10 “(h) AUTHORIZATION OF APPROPRIATIONS.—There
11 are authorized to be appropriated such sums as are nec-
12 essary to carry out this section.”.

13 (b) CONFORMING AMENDMENT.—The table of con-
14 tents of the Energy Policy Act of 1992 (42 U.S.C. prec.
15 13201) is amended by adding at the end of the items relat-
16 ing to title XXXI the following:

“Sec. 3105. Coal innovation program.”.

17 **SEC. 3. TAX CREDIT FOR CARBON DIOXIDE SEQUESTRA-**
18 **TION.**

19 (a) IN GENERAL.—Subpart D of part IV of sub-
20 chapter A of chapter 1 of the Internal Revenue Code of
21 1986 (relating to business credits) is amended by adding
22 at the end the following new section:

1 **“SEC. 450. CREDIT FOR CARBON DIOXIDE SEQUESTRATION.**

2 “(a) GENERAL RULE.—For purposes of section 38,
3 the carbon dioxide sequestration credit for any taxable
4 year is an amount equal to the sum of—

5 “(1) \$20 per metric ton of qualified carbon di-
6 oxide which is—

7 “(A) captured by the taxpayer at a quali-
8 fied facility, and

9 “(B) disposed of by the taxpayer in secure
10 geological storage, and

11 “(2) \$10 per metric ton of qualified carbon di-
12 oxide which is—

13 “(A) captured by the taxpayer at a quali-
14 fied facility, and

15 “(B) used by the taxpayer as an injectant
16 in a qualified enhanced oil or natural gas recov-
17 ery project.

18 “(b) QUALIFIED CARBON DIOXIDE.—For purposes of
19 this section—

20 “(1) IN GENERAL.—The term ‘qualified carbon
21 dioxide’ means carbon dioxide captured from an in-
22 dustrial source which—

23 “(A) would otherwise be released into the
24 atmosphere as industrial emission of green-
25 house gas, and

1 “(B) is measured at the source of capture
2 and verified at the point of disposal or injec-
3 tion.

4 “(2) RECYCLED CARBON DIOXIDE.—The term
5 ‘qualified carbon dioxide’ includes the initial deposit
6 of captured carbon dioxide used as a tertiary
7 injectant. Such term does not include carbon dioxide
8 that is re-captured, recycled, and re-injected as part
9 of the enhanced oil and natural gas recovery process.

10 “(c) QUALIFIED FACILITY.—For purposes of this
11 section, the term ‘qualified facility’ means any industrial
12 facility—

13 “(1) which is owned by the taxpayer,

14 “(2) at which carbon capture equipment is
15 placed in service, and

16 “(3) which captures not less than 500,000 met-
17 ric tons of carbon dioxide during the taxable year.

18 “(d) SPECIAL RULES AND OTHER DEFINITIONS.—

19 For purposes of this section—

20 “(1) ONLY CARBON DIOXIDE CAPTURED WITH-
21 IN THE UNITED STATES TAKEN INTO ACCOUNT.—

22 The credit under this section shall apply only with
23 respect to qualified carbon dioxide the capture of
24 which is within—

1 “(A) the United States (within the mean-
2 ing of section 638(1)), or

3 “(B) a possession of the United States
4 (within the meaning of section 638(2)).

5 “(2) SECURE GEOLOGICAL STORAGE.—The Sec-
6 retary, in consultation with the Administrator of the
7 Environmental Protection Agency, shall establish
8 regulations for determining adequate security meas-
9 ures for the geological storage of carbon dioxide
10 under subsection (a)(1)(B) such that the carbon di-
11 oxide does not escape into the atmosphere. Such
12 term shall include storage at deep saline formations
13 and unmineable coal seams under such conditions as
14 the Secretary may determine under such regulations.

15 “(3) QUALIFIED ENHANCED OIL OR NATURAL
16 GAS RECOVERY PROJECT.—The term ‘qualified en-
17 hanced oil or natural gas recovery project’ has the
18 meaning given the term ‘qualified enhanced oil re-
19 covery project’ by section 43(c)(2), by substituting
20 ‘crude oil or natural gas’ for ‘crude oil’ in subpara-
21 graph (A)(i) thereof.

22 “(4) CREDIT ATTRIBUTABLE TO TAXPAYER.—
23 Any credit under this section shall be attributable to
24 the person that captures and physically or contrac-
25 tually ensures the disposal of or the use as a tertiary

1 injectant of the qualified carbon dioxide, except to
2 the extent provided in regulations prescribed by the
3 Secretary.

4 “(5) RECAPTURE.—The Secretary shall, by reg-
5 ulations, provide for recapturing the benefit of any
6 credit allowable under subsection (a) with respect to
7 any qualified carbon dioxide which ceases to be cap-
8 tured, disposed of, or used as a tertiary injectant in
9 a manner consistent with the requirements of this
10 section.

11 “(6) INFLATION ADJUSTMENT.—In the case of
12 any taxable year beginning in a calendar year after
13 2008, there shall be substituted for each dollar
14 amount contained in subsection (a) an amount equal
15 to the product of—

16 “(A) such dollar amount, multiplied by

17 “(B) the inflation adjustment factor for
18 such calendar year determined under section
19 43(b)(3)(B) for such calendar year, determined
20 by substituting ‘2007’ for ‘1990’.

21 “(e) APPLICATION OF SECTION.—The credit under
22 this section shall apply with respect to qualified carbon
23 dioxide before the end of the calendar year in which the
24 Secretary, in consultation with the Administrator of the
25 Environmental Protection Agency, certifies that

1 75,000,000 metric tons of qualified carbon dioxide have
2 been captured and disposed of or used as a tertiary
3 injectant.”.

4 (b) CONFORMING AMENDMENT.—Section 38(b) of
5 the Internal Revenue Code of 1986 (relating to general
6 business credit) is amended by striking “plus” at the end
7 of paragraph (30), by striking the period at the end of
8 paragraph (31) and inserting “, plus”, and by adding at
9 the end of following new paragraph:

10 “(32) the carbon dioxide sequestration credit
11 determined under section 45O(a).”.

12 (c) CLERICAL AMENDMENT.—The table of sections
13 for subpart B of part IV of subchapter A of chapter 1
14 of the Internal Revenue Code of 1986 (relating to other
15 credits) is amended by adding at the end the following
16 new section:

“Sec. 45O. Credit for carbon dioxide sequestration.”.

17 (d) EFFECTIVE DATE.—The amendments made by
18 this section shall apply carbon dioxide captured after the
19 date of the enactment of this Act.

20 **SEC. 4. SEVEN-YEAR APPLICABLE RECOVERY PERIOD FOR**
21 **DEPRECIATION OF QUALIFIED CARBON DIOX-**
22 **IDE PIPELINE PROPERTY.**

23 (a) IN GENERAL.—Section 168(e)(3)(C) of the Inter-
24 nal Revenue Code of 1986 (defining 7-year property) is
25 amended by striking “and” at the end of clause iv), by

1 striking the period at the end of clause (vi)(III) and in-
 2 serting “, and”, and by inserting after clause (vi) the fol-
 3 lowing new clause:

4 “(vii) any qualified carbon dioxide
 5 pipeline property—

6 “(I) the original use of which
 7 commences with the taxpayer after
 8 the date of the enactment of this
 9 clause,

10 “(II) the original purpose of
 11 which is to transport carbon dioxide,
 12 and

13 “(III) which is placed in service
 14 before January 1, 2014.”.

15 (b) DEFINITION OF QUALIFIED CARBON DIOXIDE
 16 PIPELINE PROPERTY.—Section 168(e) of the Internal
 17 Revenue Code of 1986 (relating to classification of prop-
 18 erty) is amended by inserting at the end the following new
 19 paragraph:

20 “(8) QUALIFIED CARBON DIOXIDE PIPELINE
 21 PROPERTY.—The term ‘qualified carbon dioxide
 22 pipeline property’ means property which is used in
 23 the United States solely to transmit qualified carbon
 24 dioxide (as defined in section 45O(b)) from the point
 25 of capture to the point of disposal (as described in

1 section 45O(a)(1)(B)) or the point at which such
 2 qualified carbon dioxide is used as a tertiary
 3 injectant (as described in section 45O(a)(2)(B)).”.

4 (c) EFFECTIVE DATE.—The amendments made by
 5 this section shall apply to property placed in service after
 6 the date of the enactment of this Act.

7 **SEC. 5. CERTAIN INCOME AND GAINS RELATING TO INDUS-**
 8 **TRIAL SOURCE CARBON DIOXIDE TREATED**
 9 **AS QUALIFYING INCOME FOR PUBLICLY**
 10 **TRADED PARTNERSHIPS.**

11 (a) IN GENERAL.—Subparagraph (E) of section
 12 7704(d)(1) of the Internal Revenue Code of 1986 (defin-
 13 ing qualifying income) is amended by inserting “or indus-
 14 trial source carbon dioxide” after “timber”).

15 (b) EFFECTIVE DATE.—The amendment made by
 16 this section shall take effect on the date of the enactment
 17 of this Act, in taxable years ending after such date.

18 **SEC. 6. EXTENSION AND MODIFICATION OF ALTERNATIVE**
 19 **FUEL CREDIT.**

20 (a) EXTENSION.—

21 (1) ALTERNATIVE FUEL CREDIT.—Paragraph
 22 (4) of section 6426(d) of the Internal Revenue Code
 23 of 1986 (relating to alternative fuel credit) is
 24 amended by striking “September 30, 2009” and in-
 25 serting “September 30, 2019”.

1 (2) ALTERNATIVE FUEL MIXTURE CREDIT.—
2 Paragraph (3) of section 6426(e) of such Code (re-
3 lating to alternative fuel mixture credit) is amended
4 by striking “September 30, 2009” and inserting
5 “September 30, 2019”.

6 (3) PAYMENTS.—Subparagraph (C) of section
7 6427(e)(5) of such Code (relating to termination) is
8 amended by striking “September 30, 2009” and in-
9 serting “September 30, 2019”.

10 (b) MODIFICATIONS.—

11 (1) ALTERNATIVE FUEL TO INCLUDE COM-
12 PRESSED OR LIQUIFIED BIOMASS GAS.—Paragraph
13 (2) of section 6426(d) of the Internal Revenue Code
14 of 1986 (relating to alternative fuel credit) is
15 amended by striking “and” at the end of subpara-
16 graph (E), by redesignating subparagraph (F) as
17 subparagraph (G), and by inserting after subpara-
18 graph (E) the following new subparagraph:

19 “(F) compressed or liquified biomass gas,
20 and”.

21 (2) CREDIT ALLOWED FOR AVIATION USE OF
22 FUEL.—Paragraph (1) of section 6426(d) of such
23 Code is amended by inserting “sold by the taxpayer
24 for use as a fuel in aviation,” after “motorboat,”.

1 (c) CARBON CAPTURE REQUIREMENT FOR CERTAIN
2 FUELS.—

3 (1) IN GENERAL.—Subsection (d) of section
4 6426 of the Internal Revenue Code of 1986, as
5 amended by subsection (a), is amended by redesignig-
6 nating paragraph (4) as paragraph (5) and by in-
7 sserting after paragraph (3) the following new para-
8 graph:

9 “(4) CARBON CAPTURE REQUIREMENT.—

10 “(A) IN GENERAL.—The requirements of
11 this paragraph are met if the fuel is certified,
12 under such procedures as required by the Sec-
13 retary, as having been produced at a facility
14 which separates and sequesters not less than
15 the applicable percentage of such facility’s total
16 carbon dioxide emissions.

17 “(B) APPLICABLE PERCENTAGE.—For
18 purposes of subparagraph (A), the applicable
19 percentage is—

20 “(i) in the case of fuel produced after
21 the date of enactment of this paragraph
22 and before January 1, 2014, 70 percent,
23 and

24 “(ii) in the case of fuel produced after
25 December 31, 2013, 80 percent.”.

1 (2) CONFORMING AMENDMENT.—Subparagraph
2 (E) of section 6426(d)(2) of such Code is amended
3 by inserting “which meets the requirements of para-
4 graph (4) and which is” after “any liquid fuel”.

5 (d) EFFECTIVE DATES.—

6 (1) IN GENERAL.—Except as provided in para-
7 graph (2), the amendments made by this section
8 shall apply to fuel sold or used after the date of the
9 enactment of this Act.

10 (2) CARBON CAPTURE REQUIREMENTS.—The
11 amendments made by subsection (c) shall apply to
12 fuel sold or used after December 31, 2007.

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